

AN UNUSUAL FORM OF HABENARIA CLAVELLATA

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(Plate 131.)

To those of us having an acquaintance with some particular plant family, it is always pleasing to detect a strange feature or some unusual development in a member of that group. Any departure from type, in color, form or arrangement of the parts, is always interesting and receives close attention. I believe such abnormalities as these are caused by some temporary, accidental influence. They seldom occur in numbers, among plants in their natural environment, and usually they are quickly submerged and lost in succeeding generations.

However, there are departures from type which occasionally prove to be of more importance. If the new character or feature is persistent and becomes established, and the plant proves capable of reproducing this new character, a true variety has been established.

Having devoted considerable attention to the orchid family for a number of years, it is but natural that in the course of many days in the field in search of my favorite plants, I have happened upon a number of cases of temporary variation from normal. I have seen *Arethusa bulbosa* with its blossom pure snowy white instead of the usual deep magenta color; I have seen *Microstylis monophylla* with two apparently normal leaves instead of the single leaf from which it receives its specific character and I have seen *Listera australis* in one colony where its colorless lip was almost transparent, and in another colony where the rich mahogany-red color of the lip made the plants comparatively conspicuous. Such abnormalities, of which the foregoing are but examples, are well known among botanists of course, and are mentioned here only to illustrate the *kind* of variation which seems to involve no fundamental change in the plant. They are analogous perhaps, to cases of albinism, or cases of more than the usual number of fingers, in human beings.

But what can be said about a variation from normal, in a certain orchid which I came upon early last August, near Damariscotta, Maine, in which the abnormality took the form of *a new shape and structure of one of the parts of the blossom, and was found to be typical of a considerable portion of all the plants throughout a large area?* In this

district I found a tract which was roughly a half a mile long and a quarter of a mile wide, containing small scattered colonies of *Habenaria clavellata* in full bloom. A careful examination of more than one hundred plants throughout this area, showed that the blossoms of at least one fourth of them (probably more) had the end of their spurs divided into two distinct divergent lobes. The accompanying plate (131) shows this peculiarity so clearly that no further description is needed. The three specimens, which by no means represent extreme cases, are shown approximately full size.

This departure from the usual form of spur in this orchid is so unusual, if not actually unique, and so different in *kind* from the examples mentioned above, that it seems to me to be not only of considerable interest in itself, but worthy of record. Indeed, from the abundance of such plants at this station, I am inclined to wonder if this peculiarity may not be expected to continue to appear in their succeeding generations. If this should prove to be the case, it may then be reasonable to consider whether they do not constitute a true variety.

In this connection, it seems to me to be well worth while to learn whether this division of the spur-tip is persistent or not in this locality, and to this end I would be very glad to hear from some local botanist who would be willing to report on these plants next summer.

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THE SOIL REACTIONS OF SPIRANTHES CERNUA AND ITS RELATIVES.

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IN "Observations on the soil acidity of Ericaceae and associated plants in the Middle Atlantic States", ¹ the range of *Spiranthes cernua* (*Ibidium cernuum*) was given as from specific acidity 300 to 3, with optimum at 30. This is an unusually wide range for a single species (or variety), and it was suspected that the plants tested might not all be the same, although no opportunity for studying them more critically came to the writer. The matter has now been cleared up by Mr. Ames' recent article, "Notes on New England orchids,—I. Spiran-

¹ Proc. Acad. Nat. Sci. Phila., 1920, 110.